

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 June 2004 (17.06.2004)

PCT

(10) International Publication Number
WO 2004/051371 A3

(51) International Patent Classification⁷: G03F 7/00

(21) International Application Number:
PCT/GB2003/004911

(22) International Filing Date:
12 November 2003 (12.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0227902.4 29 November 2002 (29.11.2002) GB

(71) Applicants (*for all designated States except US*): INGENIA HOLDINGS LTD [—/—]; Mill Mall, Suite 6, Wickhams Cay 1, P.O. Box, Road Town, Tortola (VG). INGENIA TECHNOLOGY LTD [GB/GB]; New Garden House, 78 Hatton Garden, London EC1N 8JA (GB).

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): SHUNPU, Li [CN/GB]; 215 Ditton Fields, Cambridge CB5 8QH (GB).

(74) Agent: GILL JENNINGS & EVERY; Broadgate House, 7 Eldon Street, London EC2M 7LH (GB).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
7 October 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TEMPLATE

(57) Abstract: A template is formed from a layered structure comprising a substrate and a single-phase polymer layer positioned on the substrate. The polymer layer comprises a textured surface, the texturing being caused by induction of stress in the polymer layer. The template finds use in the manufacture of a structure on the nanometre scale, which comprises the steps of providing a template and molding a material on to the template, followed by removal of the molded material from the template to provide a structure on the nanometre scale, such as an array, a grid, an optical device or an electronic device. The template may be made by a method comprising the steps of depositing a layer of a single-, phase polymer on to a substrate, baking the resulting structure at a temperature below the glass transition temperature (T_g) of the single-phase polymer, texturing a surface of the polymer layer by inducing stress in the polymer layer and annealing the resulting structure to provide a template.

WO 2004/051371 A3